

CLAIMS:

1. Optical information carrier for carrying information to be read out by means of an optical beam (9) comprising:
 - at least one information layer with cavities (4) having a width (A) of 50 μm or less and with lands (5) between said cavities (4), wherein said cavities (4) have a smaller width (A) than depth (B), and
 - optically active material (7) deposited on said lands (5) adapted to show an optical signal, when being stimulated by said optical beam (9).
2. Optical information carrier as claimed in claim 1, characterized in that said cavities (4) have a width (A) of 10 μm or less.
3. Optical information carrier as claimed in claim 1, characterized in that said cavities (4) contain no optically active material (7).
4. Optical information carrier as claimed in claim 1, characterized in that the ratio of said depth (B) to said width (A) is 1.5 or higher.
5. Optical information carrier as claimed in claim 4, characterized in that the ratio of said depth (B) to said width (A) is in a range from 1.5 to 2.5.
6. Optical information carrier as claimed in claim 1, characterized in that a cover layer is located between said lands (5) and said optically active material (7).
7. Optical information carrier as claimed in claim 1, characterized in that said optically active material (7) is fluorescent material.
8. Optical information carrier as claimed in claim 1, characterized in that said optically active material (7) contains a matrix material and a dye material.

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9. Optical information carrier as claimed in claim 8, characterized in that said matrix material is a material of the group including: polyvinylacetal, poly(methyl)acrylate, polyether, polyester, polycarbonate or polyalcohol and said dye is a material of the group including: xanthene, acridine, oxazine or coumarin.

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10. Optical information carrier as claimed in claim 1, characterized by a plurality of information layers containing cavities (4) and lands (5) and spacer layers separating successive information layers.

10 11. Device for manufacturing an optical information carrier having at least one information layer comprising:

- means for forming cavities (4) having a width of 50 μm or less and for forming lands (5) between said cavities (4) in said at least one information layer, wherein said cavities (4) have a smaller width (A) than depth (B), and
- 15 - means for depositing an optically active material (7) on said lands (5) adapted to show an optical signal, when being stimulated by an optical beam (9).

12. Device as claimed in claim 11, characterized by means for forming cavities (4) having a width of 10 μm or less.

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13. Device as claimed in claim 11, characterized in that said means for forming cavities (4) and for forming lands (5) are adapted to form cavities having a smaller width (A) than depth (B).

25 14. Method for manufacturing an optical information carrier having at least one information layer comprising the steps of:

- forming cavities (4) having a width of 50 μm or less and forming lands (5) between said cavities (4) in said at least one information layer, wherein said cavities (4) have a smaller width (A) than depth (B), and
- 30 - depositing optically active material (7) on said lands (5) adapted to show an optical signal, when being stimulated by an optical beam (9).

15. Method as claimed in claim 14, characterized by forming cavities (4) having a width of 10 μm or less.

16. Method as claimed in claim 14, characterized by using spin coating with a rotation frequency of about 200rpm and larger for depositing optically active material (7) on said lands (5).

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17. Method as claimed in claim 16, characterized by applying a non-wetting layer, a plasma treatment, an etching or washing treatment to said lands (5), or depositing a cover layer on said lands (5) improving the connection between said lands (5) and said optically active material (7).

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